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- Skilled migration in the form of "brain drain" and movement of professionals has become an important part of international migratory flows (Brandi, 2001: 102). Referring mainly to the emigration of skilled and professional people from less developed regions to the most developed, the term "brain drain" officially appeared in the 1960s to address skilled migration from Europe, especially from the UK, to North America (Salt, 1997).
- Although the phenomenon of skilled migration is far from being new, the numbers and trends are changing rapidly (Iredale, 2001; Salt, 1997; Commander, 2003). First of all, the flow of highly skilled represents an increasingly large component of global migration streams (Rudolph and Hillmann, 1998; Findlay, 1990; Salt, 1992; Iredale, 1997). Therefore, immigration of the highly skilled people has become an "inseparable segment of national technology and economic development policies" (Mahroum, 2001: 27) and is certainly having its share in terms of migration debate.¹ It is estimated that there are 1.5 million professionals from developing countries in the industrial countries alone (Stalker, 2000; quoted in Iredale, 2001: 8). Studies indicate that "the number of migrants residing in OECD countries increased by 50 per cent within the ten years between 1990 and 2000, and that the increase in the number of skilled migrants is equal to 2.5 times that of unskilled migrants" (Docquier and Rappoport, 2004; quoted in Schiff, 2006: 202).
- Secondly, skilled migration is facilitated by the policies of receiving and developed countries (Stalker, 2000: 108; Castles, 2002: 1151; Pellegrino, 2001: 11). The United States is still the number one to attract human capital and highly skilled (Cheng and Yang, 1998: 627). Other countries, like Germany, France, the UK, Australia, New Zealand, Canada, and East Asian countries have recently established certain programs to attract more skilled labor and to increase their participation and share in the labor markets (Lowell, 2002a; Findlay and Stam, 2006; DeVoretz, 2006; Martin and Kuptsch, 2006). For

- example, in France, a specific visa has been introduced to allow scientists from non-European countries into the country. In Germany, "green cards" have been introduced for IT specialists.² Outside the EU, Australia and Canada have started to implement new policies to attract highly skilled professionals (Mahroum, 2001: 28).
- The emigration of the highly skilled³ has been a concern for scholars and policymakers for many decades. Especially in the early 1970s, research on brain drain and migration of professionals or highly qualified personnel from developing countries especially to the United States highlighted this topic in the context of a dichotomy between the loss of sending countries and the substantial gain of the receiving ones (See Portes, 1976; Fortney, 1970: 231). The early literature on "brain drain" goes as far as proposing taxation (a tax levied on the receiving country and transmitted to the sending country) of the brains lost (Bhagwati and Hamada, 1974), or imposing restrictions on the mobility of the highly skilled. There is a myriad of terminology other than "brain drain", including "brain exodus", "brain migration" or "brain emigration", "exodus of talent", and "brain export" (Khadria, 2001: 46; Tanner, 2005: 20-21). However, irrespective of the particular terminology, the concept is associated closely with the flight of "brain power" or "loss of human capital" (Meyer, 2001). Human capital is described as the stock of knowledge embedded in people and it is a key to economic growth in any country (Martin and Kuptsch, 2006).
- Nowadays, there has been growing recognition that emigration of skilled labor may not be all that negative for the sending country (Commander et al., 2003; Beine, Docquier and Rapoport, 2001). Accordingly, some scholars even argue that skilled migration from a sending country might bring positive outcomes in the long run, such as by encouraging more human capital by motivating those who stay in the sending country; by ensuring knowledge transfer to the country of origin; by creating networks between sending and receiving countries which facilitate trade, capital, and knowledge flows; and by reducing the immediate pressures on employment of less skilled in the developing countries (Commander et al. 2003; see also Docquier and Marfouk, 2006; Docquier and Rapoport, 2004; Lowell, 2002b).
- Along with this new more optimistic attitude towards skilled migration, the terminology has started to change as well into more positive connotations, and new paradigms appeared, like "brain circulation", "brain gain", and "brain exchange" (Lowell et al. 2004; Williams and Baláz, 2005). There is also increasing optimism that in time "brain drain" will turn into "brain exchange" (two-way flow of skilled people between countries of origin and destination) or "brain gain" (the opposite situation of 'brain drain' in which highly skilled tend to return to the country of origin).
- There are only a few and limited studies previously carried out on highly skilled migration from Turkey to the USA (Tansel & Güngör, 2003; Kurtuluş, 1999; Oğuzkan, 1975). This paper therefore seeks to construct a descriptive and an exploratory study on such issues. Furthermore, it will analyze the movement of highly skilled people from Turkey to the USA, which has been the main destination country for Turkish professionals and students since 1950s. Based on qualitative and quantitative data, it will also shed light to the debate around "brain drain" and "brain gain" in Turkey and try to answer whether emigration of highly skilled people, including graduate students, or so-called "brain drain" phenomenon is detrimental for Turkey, and what are the costs and benefits of this process. In line with the findings, some suggestions on the migration policy of Turkish government on the highly skilled were made in order to

turn "brain drain" into "brain exchange" and make it profitable for both parties involved: the individuals, *i.e.* skilled migrants, the country of destination — in this case, the USA — and the country of origin, Turkey.

Highly Skilled Migration from Turkey to the USA

- Because of the distance, lack of social networks and immigration laws, Turkish migration to the US was insignificant for a long time. After the first wave of immigration from the Ottoman Empire in the early 1900s involving mainly non-Muslims and some unskilled and semi-skilled Muslims from lower socio-economic and rural backgrounds (See Remiers, 2005; McCarthy, 2001; Daniels, 2002; Pultar, 2000; Halman, 1980; Ahmed, 1993; Karpat, 1985), the second wave of Turkish migration to the US took place between 1950 and 1980. This time, it was more of a highly skilled migration as many professionals and graduate students were involved. As opposed to the male-dominated first flows, there were many young women and accompanying families. In the 1960s, 10 000 persons entered the US from Turkey, and another 13 000 in the 1970s (Remiers, 2005: 216). According to a research carried out by National Science Foundation (NSF), between 1956 and 1970, 907 Turkish engineers and 594 Turkish medical doctors came to the US (Oğuzkan, 1976).
- 9 After 1980s until now, the flow of Turkish nationals to US took many different forms from an increasing number of students, to professionals, as well as from clandestine migration to unskilled and semi-skilled labor. After 1980s, there was also an increase in the number of temporary skilled migrants, as many Turkish students, scholars, and professionals came from Turkey to the USA. It is, however, difficult to determine how large the Turkish skilled migration flows are. For one thing, the statistics on skilled migration are scarce. Many Turkish Americans do not participate in census surveys or those who participate often identify themselves as 'white' rather than as Turkish-Americans (Kaya, 2003: 60). Secondly, skilled people use different channels to reach their destinations and the status between temporary and permanent is usually blurred.
- According to the *US Immigration and Naturalization Service* (INS), 465 771 Turkish immigrants have come to the United States of America between 1820 and 2004. Micallef states that there are approximately 200 000 Turkish Americans (2004: 233). Similarly, according to the OECD's conservative estimations (İçduygu, 2004), the number of Turkish people living in the United States is given as 220 000 in 2003. Turkish Foreign Ministry has no precise figures for total number of Turkish people living in the USA However, Turkish consular offices in Washington DC, New York City, Los Angeles, Houston and Chicago base their estimates of 350 000 Turkish Americans.
- According to the 2004 American Community Survey of US Census Bureau, 149 556 people reported their ancestry as Turkish. Results from US Census 2000 show that there were 78 378 foreign-born⁴ from Turkey in the United States. According to the US Census 2000, the profile of Turkish people born in Turkey and living in the US is as follows: 35 025 (44.7 per cent) of them were naturalized citizens with more than half (21 080) entered the US before 1980; whereas 43 350 (55.3 per cent) were not a US citizen with the majority of them (33 030) entered the US between 1990 and 2000. The gender distribution was 54.7 per cent male (42 880) and 45.3 per cent (35 500) of them were females. The majority of the sample data, *i.e.* 19 480 people (24.9 per cent), was between 25 and 34 years old. As for educational attainment, overall 42.7 per cent had a

bachelor's degree or higher and 14 935 (23.1 per cent) of them were holding graduate or professional degrees. In the US Census 2000, the five states with the largest populations of foreign born from Turkey were given as New York, California, New Jersey, Florida, and Massachusetts. Combined, these five states constituted 60.7 percent of the total foreign-born population from Turkey in the United States. There is also a fast-growing Turkish population in Philadelphia (Reimers, 2005: 216).

Concern about the Turkish emigration of highly skilled and "brain drain" was high on the agenda in the 1970s in Turkey, as an important part of people living Turkey for the US implied "brain drain" or "brain loss" for Turkey (Kurtuluş, 1999: 54-55). Oğuzkan's survey (1975) based on 150 replies to a questionnaire carried out among Turkish highly skilled with doctoral degrees working abroad in 1968 was very timely at that time to explore the "brain drain" movement from Turkey. However, mass unskilled migration in the 1960s and the 1970s, and the economic and political downturn in the 1980s gained much attention of both the Turkish public and policy circles. The Turkish academic world also followed suit in its lack of interest to highly skilled migration. One of the other reasons that the debate on skilled migration lost vigor in Turkey between 1980s and 1990s was that international migration topics at that time usually revolved around guest-worker programs and integration issues, asylum seekers and Turkey's changing role from an emigrant country to a transit country.

On its part, the topic of brain drain has received greater attention from the Turkish media and often portrayed as a serious socio-economic problem, especially in the wake of 2001 economic crisis in Turkey. Many Turkish scientists, engineers, physicians and other highly skilled professionals still live and work in the United States. The success of Turkish engineers, doctors, and scientists attracts the attention of Turkish media and sometimes described as "fetish of the successful Turk abroad". More recently, a number of articles also appeared on the non-return of students and scholars, warning about a possible brain loss in the future unless serious measures were taken.

The issue of "brain drain" has attracted more attention in recent years from Turkish scholars (Kurtulmuş, 1992; Kurtuluş, 1999; Kaya, 1999; Işığıçok, 2002; Gençler and Çolak, 2003; Tansel and Güngör, 2003; Erdoğan, 2003; Çulpan, 2005; Gökbayrak, 2006). ⁸While most of the recent research is lacking empirical data and much more focused on developing strategies for Turkey in order to pave the way for brain gain, some depended on Internet surveys and conventional mail to reach respondents. ⁹ These studies also indicated that in Turkey's case there was a relationship between economic and political instability and emigration of skilled people. Another problem was the slow absorption of young graduates into Turkish labor force. Labor force participation rates have not kept up with the pace of growth of young population in Turkey, leading internal migration for unskilled and international migration and brain drain for the skilled (Tansel and Güngör, 2003: 53-54; Kurtuluş, 1999: 24).

Theoretical Framework

For many years, highly skilled migrants were not visible ¹⁰ and migration theories have not even considered the movement of highly skilled as migration, as their movement may be relatively short-term, and because they are middle-class, well-paid, and definitely do not constitute a problem for the governments of receiving countries (Iredale, 1997: 4; Koser and Lutz, 1998: 7-8). Today, many highly skilled around the

world have become even more mobile thanks to globalization, advances in technology, and creation of new cutting-edge jobs and this mobility is expected to increase in the years to come (Docquier and Marfouk, 2006: 151; Kapur and McHale, 2005: 209).

A theoretical framework for skilled migration needed to incorporate a mixture of micro and macro-variables (Salt and Findlay, 1989; Iredale, 2001). According to human capital theory, which is constructed at micro-level, people move to find more attractive and better-paid jobs in line with their education and training. At the macro-level, the world systems theory, built on the work of Wallerstein (1974) considers international migration as a natural outcome of economic globalization and market penetration across national boundaries (Alarcon, 2000: 306; Quaked, 2002; Cheng and Yang, 1998). Nonetheless, there is no room in these two approaches for the important role played by various formal and informal institutions, ethnic and other networks. Therefore, it is important to include a "structuration" approach (Giddens, 1990; Goss and Linquist, 1995) or to add a "meso-level" (relational) (Faist, 2000) to the already existing micro (individual) and macro levels (structural), thereby connecting individuals, institutions and other organizational agents.

17 At the micro-level, the mobility for the highly skilled is still a strategic decision to have more professional opportunities, to attain additional qualifications, to work in a dynamic environment, and to accumulate more income as well as status. Age, gender, family obligations, marriage partners, nationalistic sentiments, homesickness, and the education of children are among other important criteria at micro-level.

18 At the meso-level, institutions and expatriate networks are creating more skilled migrants and these networks, which mobilize more migrants, are considered as determinants of a migration process. In Turkey, the role of many private foundations such as Fulbright, private counseling companies operating for university education abroad, formal and informal organizations in the US, and other institutions such as YÖK (Yüksek Ö ğretim Kurumu - Office of High Education) and private universities especially those offering education in English - in sending Turkish students abroad, should not be underestimated. Connections with earlier migrants provide potential migrants with information and resources and eliminate the high costs of migration in the absence of supportive networks in countries of origin (Meyer, 2001: 93; Tanner, 2005: 27; Kapur and McHale, 2005: 125-128). Social networks play a critical role in the migration of highly skilled and Turkish students. The foreign-educated Turkish instructors and academicians are also said to accelerate the tendency to go abroad for further study at master's or doctoral level. Social networks not only facilitate migration but also channel it by choosing whom to migrate to fill in jobs, and to work as research assistants. The personal connections are important for Turkish respondents in coming to the USA, finding a proper job or finding emotional support to ease initial settlement. Highly skilled have the ability to mobilize their social capital even in a more effective way because they rely on more extensive and diverse networks, which consists of professional colleagues, fellow alumni, acquaintances and friends (Meyer, 2001: 94). Networks also facilitate trade and technology transfer. Moreover, they have the potential to turn brain drain into brain circulation. This can be also termed as the "diaspora effect" (Bhagwati, 2003; Barre et al., 2003; quoted in Lowell et al., 2004: 22). 11

At the macro-level, the process of skilled migration — like any other type of migration — goes hand in hand with the restrictions of states on mobility in general, institutions, multinational companies, internationalization of labor and globalization of

human capital and markets. Skilled migration can also be seen within the context of transnational processes as this kind of migratory flow takes place in an environment of dense networks, and ever increasing internationalization of higher education and labor markets (Pellegrino, 2001: 121). Transnationalism offers new perspectives for understanding the migration experiences of skilled migrants (Alarcon, 2000: 307). Nonini and Ong (1997) argue that the globalization of the world economy has led the appearance of transnational professionals with expertise in managerial, financial, legal, technical, and commercial services (quoted in Alarcon, 2000: 307).

Data Collection and Methodology

- The data used in this paper is a result of almost two-year research in different cities in the US and in Turkey and it is part of the project supported by the Migration Research Program at Koc University (MiReKoc) in İstanbul and the Turkish Foundation of Social and Economic Studies (TESEV). The data was collected from all available secondary data, onsite observation and inquiry, and semi-structured and in-depth interviews with (a) graduate students currently studying in different cities in the USA, (b) former students who have finished their studies and started working in the USA as young professionals between 25 to 45 years old, (c) those who came to the US 20 or 30 years ago and decided to stay for a number of reasons, (d) representatives of Turkish Students' Associations; (e) educational attaches and other government officials at the Turkish Embassy in Washington, DC, at the Turkish General Consulate in New York City; and also with the General Consul of Houston and the General Consul of Los Angeles. There were also a couple of interviews and meetings with the US officials and scholars working on skilled migration. While most of the time, there were face-to-face interviews with key respondents, a small part of the data on respondents was collected through a web survey. The e-mail addresses of doctoral students studying in the USA and some Turkish scholars working at research centers and at universities were collected from various sources, including the directories of universities, the Institute for Turkish Studies at Georgetown University, as well as some Turkish student associations, especially Intercollegiate Turkish Students Society (ITSS).
- 21 These different types of data collection proceeded in stages, collection of secondary data was being first, and on-site observation was being second, followed by interviews and Internet survey. An anthropological research strategy was included into the project. For example, life histories were collected through repeated interviews and participant observation was practiced during reunions, association meetings, and gatherings. Qualitative and quantitative data were collected from selected study sites, i.e. multinational companies, Turkish American associations, and the universities in the USA, mainly in New York City, Massachusetts, Virginia, Maryland and Washington DC where a great number of universities are located. The interviews formed the heart of the inquiry. Semi-structured and in-depth interviews were conducted with 140 persons selected on the basis of their departments and working sectors. In order to show the diversity and possible differences and similarities between respondents, 45 people who have completed studies and started working in the US and 50 people who are still studying at the graduate level (including post-doctoral level) were interviewed. An additional 25 people who came to the U.S. with the initial intention to study at least 20 or 30 years ago and became successful in their field were also interviewed to trace the

motivations and reasons of non-return of the so-called "pioneer" migrants. Ten interviews were conducted also in Turkey among those who have studied in the US and returned to Turkey to assume high-end employment positions in the private sector in big cities, especially in İstanbul, and ten interviews were conducted with the university students in Ankara to assess their future intentions to emigrate to earn master and/or PhD degrees abroad.

Research Finding and Analysis

- According to Iredale, there are six often-overlapping typologies of categorizing professional migrants: 1) by motivation (forced exodus, government induced, industry led), 2) by nature of source and destination countries (lack of economic opportunities, poor working and intellectual environments in the country of origin), 3) by channel or mechanism (recruitment agents, ethnic networks, multinational companies), 4) by length of stay (permanent or temporary), 5) by mode of incorporation to the host society (disadvantaged, neutral, advantaged), 6) by nature of profession (the extent of internationalization varies with professions) (2001: 16).
- The major three groups fall under these typologies as well. These are graduate students, who are motivated to go to the USA because of more opportunities in research and education; young professionals who decide to stay on in the host country usually after their studies because of the nature of global markets, wage differentials, differences in living conditions between the two countries, and education of their children; pioneer skilled migrants or first-comers who arrived in the USA in the 1960s and 1970s and who became permanent in the US due to economic, social, professional and political conditions in Turkey at that time. This latter group is the most integrated in the host country but also the most active in the philanthropic activities through associations between Turkey and the USA. Two other groups are the returnees, who have gone back to Turkey because of a combination of personal and professional reasons, and undergraduate students, who are still in Turkey, but who would like to do further studies abroad in the near future.

Turkish Graduate Students

- A significant component of skilled migration is accounted for by foreign students that stay on after completion of degrees (Commander et al., 2003). Therefore, it will not be wrong to call international students another group of professional migrants (Alberts and Hazen, 2005). Louscher and Cook estimate that each Turkish student in the United States spends more than 28 000 USD per year. ¹² Overall contribution of foreign students to the US economy is around 13 billions USD a year (IIE, 2005). International students are also believed to bring educational benefits to the American higher education by enriching American culture and by making significant contributions to teaching and research. The top ten countries of origin of foreign students at university level in the United States were (in descending order): India, China, Republic of Korea, Japan, Canada, Taiwan, Mexico, Turkey, Thailand and the UK. ¹³
- We have to note however that the statistics on the number of Turkish students in the US are contradictory. According to the 2005 IIE Report, there are 12 474 Turkish students in the US out of which 6 486 of them are graduate students whereas 5 114 of

them are undergraduate students and 874 of them are other students coming for languages courses and vocational schools. Louscher and Cook (2001), however, estimate around 15 000 Turkish students are attending American educational institutions. According to the 2004 Yearbook of Immigration Statistics released in January 2006 by the US Homeland Security, the number of Turkish students reached 14 518 and the number of their spouses and children were given as 611.

Student and Exchange Visitor Program of the US Immigration and Customs Enforcement, indicates that as of April 24, 2006, there are a total of 13 923 Turkish students in the US out of which 11 905 hold F-1 (academic) visa, 18 of them with M-1 (vocational visa), and 2000 with J-1 (exchange visitor) visa. These statistics also indicate that 35.7 per cent of all Turkish students are females whereas 64.3 per cent are males. Turkish Students are concentrated in New York State (2 286), California (1 390), Massachusetts (980), Texas (699), Pennsylvania (670), Florida (541), Illinois (524), New Jersey (462), and Virginia (436). Tables 1 and 2 indicate the top five courses of study by number of active Turkish students and top 10 schools by number of Turkish graduate students in the US respectively.

Table 1: Top 5 Courses of Study by Number of Active Students

Course of Study	Number of Students
1. Business Administration and Management, General	1 598
2. Second Language Learning (NEW)	1 382
3. Economics, General	630
4. Electrical, Electronics and Communications Engineering	458
5. Computer Science	333

Source: U.S. Immigration and Customs Enforcement, Student and Exchange Visitor Program, 2006.

Table 2: Top 10 Schools by Number of Turkish Graduate Students

	School Name	Number of Active Students
1	The City University of New York	179
2	Georgia Institute of Technology	125
3	University of Illinois	103
4	University of Florida	91
5	Columbia University in the City of New York	90
6	The Pennsylvania State University	89

7	New York Institute of Technology	85
8	The Ohio State University	84
9	Rutgers, the State University of New Jersey	80
10	Boston University	78

Source: U.S. Immigration and Customs Enforcement, Student and Exchange Visitor Program, 2006.

The first group of respondents included adult foreign-born persons who initially came to the United States from Turkey to pursue graduate studies. The ages of the respondents ranged from 25 to 36, with a mean age of (n = 50) 28 years, 11 of them (22 per cent) were married at the time of the interview. Three out of 11 married respondents were married to American and/or foreign nationals. 13 of the respondents were females (26 per cent) and the rest 37 of them were males (74 per cent). The majority of the graduate student respondents (19 of them) in the US were studying engineering (38 per cent), with 12 of them majoring in finance, business administration, economics and management, eight of them in the basic sciences, like physics, mathematics, chemistry, and biology; seven of them in the social sciences, like political science, international relations, and international law; three of them (all MEB-Millî Eğitim Bakanlığı, ministry of National Education) students in the education departmentse college of design. They were coming from mainly from universities in İstanbul and Ankara. 16 of the respondents were graduates of Boğaziçi University, 13 of them had undergraduate studies in Middle Eastern Technical University (ODTÜ: Orta Doğu Teknik Üniversitesi), and three of them completed undergraduate studies at Bilkent University whereas three of them had diplomas from Koç University. The rest of the student respondents reported that they finished their undergrad studies at Marmara, İstanbul, Hacettepe, Ankara, İstanbul Technical and Sabancı Universities. Apart from universities located in Ankara and İstanbul, one of the respondents came from Dokuz Eylül University in Izmir, and the other one from Çukurova University in Adana. Two of the respondents, on the other hand, came to the USA after finishing Robert College in İstanbul and stayed on for graduate studies.

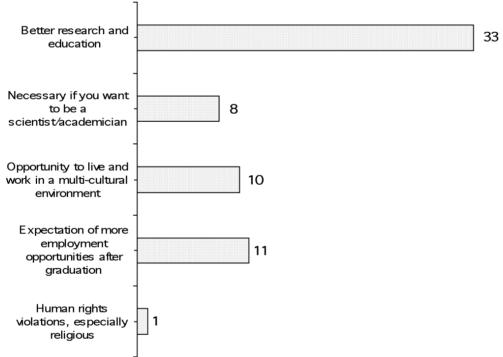
The internationalization of higher education owes a great deal to the institutional collaboration between universities in countries of origin and destination (Iredale, 2001: 9). Although nowadays the majority of Turkish students are private students financing their own means, there are also those holding state scholarships. The reason behind sending these students is mainly to train academicians to fill positions in state universities. Two of the respondents were on YÖK scholarships, three of them were on MEB scholarships, one of the students received Jean-Monnet/Fulbright scholarship whereas another one financed his studies through private funding (his family). One of them depended on his family (private) and scholarship he received from the university in the USA. The majority and the rest of the respondents (90 per cent) got full scholarships from the US universities, while some also work as teacher's assistants and research assistants.

As for professions of parents, most of the respondents reported that they came from educated and middle or upper-middle class families. Their parents were either retired or working as engineers, lawyers, university professors, businessmen, physicians,

contractors, pharmacists, economists, and teachers. In fact, only two respondents said that their parents did not receive any university education: one of the fathers is a truck driver and the other one is a farmer, with primary school education. Mothers of nine respondents were housewives with university or at least high school education and their husbands had well-earning jobs. Only one of the respondents stated that his mother was deceased and one of them reported that his mother was illiterate.

30 Before coming to the US, they got information about the department and educational institution through their friends, family members, Internet, and professors either in Turkey who studied in the US or those who came to Turkey for a conference or for scholarly exchange. As for reasons that led them seek further education in the US, most of them stated the main pull factor was better research facilities and higher quality education in the US whereas a number of them reported that it was necessary for them to come to the US in order to become self-sufficient academicians. An equal number said that expectation of more employment opportunities after graduation was an important factor. They also mentioned the opportunity to live and work in a multicultural environment and only one brought up human rights violations, especially violation of religious rights in Turkey as a reason to come to the US (see Figure 1 below).

Figure 1: Reasons of seeking further education abroad



The amount of time the respondents in this group had been living in the U.S. ranged from a minimum of one year to a maximum of 11 years (for the respondent who came for undergraduate studies and stayed on for post-graduate as well) with a mean of 4.16 years. It seems that perceptions of individuals, extensive use of media and the internet, private recruitment agencies, socio-cultural influences, like knowledge of English and familiarity with the American culture, and social networks play an important role in choosing the US as a destination country for further study among Turkish graduate students. There are other pull factors as well, like the superiority of education at some

US universities and availability of research and funds. They often see a western degree as a ticket to employment in the industrialized countries or to find a better-paying job in the home country.

The 1982 Constitution of Turkey paved the way for non-profit foundations to establish higher education institutions, which marked the beginning of private universities in Turkey. At the same time several new state universities were opened in the recent years in many parts of Turkey. Today, there are 24 private and 53 state universities throughout Turkey. It is suggested that the private universities have reversed the brain drain to a certain extent (Tansel and Güngör, 2003: 54), especially at the undergraduate level. But in certain fields of study, due to the limited research opportunities in Turkey, and lack of interest given to young scientists, many graduate studies but for the graduate level, if you want to become a scientist, your options are very limited and no grants for research and lab. I was given awards for my PhD research in the USA but still nobody from YÖK or TÜBİTAK called me to congratulate. In the last years, many private universities were opened but in my field (molecular science) the research is still limited" (26 year-old physics student).

Main Problems while Studying Abroad

- Adaptation problems due to cultural differences, missing Turkish food, loneliness, homesickness and being away from family and loved ones, F1 visa problems, racism and discrimination in some cities especially after 9/11, and some financial problems were cited as the main problems of student respondents.
- Compulsory military service is another reason among young males for not returning to Turkey immediately after the completion of studies. Two of the male respondents stated that military service in Turkey was a major obstacle for Turkish young men. If they work for a period of three years abroad, then they exempt from long-term military service and have the option of doing one-month of basic military training in return for 6,048 USD in Burdur, Turkey. State-sponsored respondents mentioned the pressure to finish studies on time and they were also concerned whether they could find a similar work and research environment in Western Turkey: MEB-sponsored students especially complained about language problems and lack of communication with their professors.
- Almost half of the respondents (46 per cent), however, said that they had either not encountered any problems in the US at all, or had to face minor problems at the beginning, and that the environment is so civilized and that they did not feel that they are foreigners in the USA. Most of them had international friends and a small cluster of Turkish friends. 58 per cent stated that they visit homeland once a year, 22 per cent twice a year, and 20 per cent once in every two or three years. They usually read Turkish newspapers, like *Milliyet*, *Hürriyet*, *Radikal*, *Sabah* online, and the majority of them had contacts with Turkey through telephone and e-mails twice or three times a week. More than half of the respondents (29) stated that they go to Turkey once a year.
- Many student respondents underlined the differences between Turkish and American culture, and their limited relations with American society in general. Often, their workload as a graduate student is given as an excuse not to involve with the dominant culture other than professional ties. As for the information on labor market and job

opportunities in Turkey, a great majority of respondents (74 per cent) reported that they did not know much about job opportunities in Turkey.

Future Plans

Even though the future intentions of student respondents are not a perfect measure on the actual number of those who stay in the US or go back to Turkey, they still can be a useful indicator (See also Li et al. 1996; quoted in Alberts and Hazen, 2005: 133). 21 respondents (42 per cent) regarded themselves temporary in the US although except those who were sent on state scholarships, they all said they would like to work for a couple of years to gain some experience: "I don't plan to stay in the US after graduation. I hope I can be useful to my own country. If someone is good enough to find employment and education opportunities in the US, then he will find employment in his own country too. There should be no excuses" (30 years-old engineering student).

Only 16 per cent of the respondents expressed that they would like to stay on a permanent basis in the US. An equal number of respondents (42 per cent) did not have any idea, however, what they would like to do after completing their studies: "I don't have a definite future plan. I have seen so many people who wanted to go back to Turkey and stayed. I have known many people, on the other hand, who wanted to stay in the US but who returned. I would willingly consider staying in the US. But it is difficult to say anything at this moment" (25 years-old economics student).

In answering a question whether they believed that Turkey would be EU member state eventually, 54 per cent (27 respondents) said they did, whereas 46 per cent (23 respondents) said they did not. In answering another question whether Turkey's success to create favorable economic conditions in line with the harmonization process with the EU would affect their decisions to return home after completing studies in the US, 62 per cent said that it would, 26 per cent said maybe, and 12 per cent said that it would not affect in any case, either because they were planning to return anyway, or they made up their minds not to return. Some students, on the other hand, reported that they did not want to return to homeland if they cannot find a way to implement their training in Turkey either because of unemployment and underemployment or lack of equipment and resources.

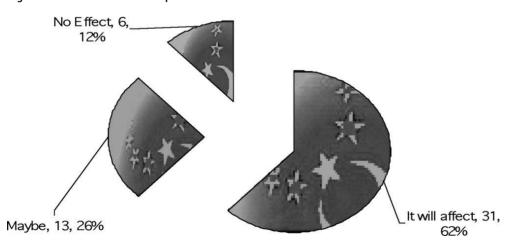


Figure 2: Will the EU membership affect decisions to return?

Young Professionals

- This second group of respondents mainly consisted of young professionals who are still working in the United States with visas such as H-1B after completing their studies in the US (with three exceptions: one respondent had L-1 visa, another had a laissezpasser as she was working at the World Bank, another was born in the US), and those who have obtained green card or who have become naturalized American citizens. The ages of the respondents ranged from 27 to 45, with a mean age of (n = 45) 35.33 years. The gender distribution of the respondents was 16 females (35 per cent) and 29 males (65 per cent). 25 of the respondents (55 per cent) were married (four of them married to Americans and one married to Chilean), 15 of them were single (33 per cent), four of them were engaged and one was divorced. 28 of the respondents (62 per cent) were born in three major cities in Turkey: İstanbul, İzmir and Ankara. Three of the respondents reported that they were born in the US as their parents were working in the U.S. as non-immigrants at that time. Including these three respondents born in the U.S., there were a total of 15 people with dual nationality, another 15 with green card, nine with H-1B visas awaiting green card, three with H-1B visas, one with L-1 visa, one Turkish citizen working in the World Bank, and one American citizen (1.5 generation born in Turkey but son of a skilled immigrant). They have diverse occupations, ranging from medical doctors to artists, from managers to scholars, from architects to IT specialists, from artists to businessmen. Almost half of the respondents (including lawyers and medical doctors) have PhDs. They spent a minimum of three years to a maximum of 17 years in the United States. Although there were a couple of exceptions, one general characteristic of this group of young professionals was that they usually had a small group of Turkish friends which they met on a regular basis and they did not have much time to be actively involved in the Turkish-American associations.
- Among those interviewed, no professional has complained about receiving lower wages than native-born professionals holding similar positions. What they complain about is the existence of a glass ceiling (See also Alarcon, 2000: 318) and the difficulty of finding jobs as easily as they used to before 9/11. Some of them also mentioned that they did not get any raise or promotion while their companies apply for the green card on their behalf.

Que Sera, Sera? Return intentions of Young Professionals from Turkey to the USA

The main reasons of coming to the US were cited as further training in their field of study and to get a master's or doctoral degree from one of the educational institutions in the US. Most of the respondents (93 per cent) were temporary in the United States at first with the academic student visa F-1 and then with the non-immigrant visa H-1B. Some acquired citizenship through marriages or obtained green cards, allowing permanent residence in the US. As noted earlier, three respondents were born in the U.S. Many young Turkish professionals decided to stay on after their graduate studies. This is a clear evidence that globalization of higher education is the first step in a skilled international migration path. Many Turkish students do not return immediately after the completion of studies but instead they choose to stay and work in the host country. Earlier studies also point out the fact that many students from developing countries fail to return their home countries upon completion of their studies in the US by changing their immigration status after graduation (Fortney, 1970: 220). The

distinction between permanent and temporary residency, which once separated the two categories of migration (professionals and students) has lost its prominence (Khadria, 2001: 48). Most of the time, the admission conditions of skilled people are temporary but temporary may lead to permanent migration if the conditions are conducive.

21 respondents considered themselves permanent in the US, whereas 16 of them were not sure, and eight reported that they would definitely return within a couple of years. For some respondents, returning may become especially difficult when it means terminating some established relations while building up new ones and also when the economic conditions in Turkey remain uncertain. Some of the reasons of non-return were cited as: 1) Economic reasons (wage differentials, higher living standards, unemployment, underemployment); 2) Personal reasons (anxiety about the future, children's education¹⁷); 3) Political reasons (political instability, bureaucratic obstacles, corruption); 4) Professional reasons (not enough R & D, lack of scientific research at universities, lack of opportunities for highly skilled studied in the USA). After a costbenefit analysis, there is a tendency to stay in the US for almost half of the respondents, especially for those who have children at school age, for certain professions, such as researchers and scientists. Those who were not sure about their future plans and returning to Turkey stated that they could move elsewhere other than US or Turkey and make a living as global workers. While some respondents believed that there is still "brain drain" or "brain migration" from Turkey to the US in certain fields and professions, some others indicated the recent return trends of their close friends (see also the returnees in the coming pages).

"Pioneer" Highly Skilled from Turkey

- This group of respondents included those who have been in the US for at least 20 years and who have become either become American citizens or dual citizens (with the exception of one respondent working in the World Bank). The ages of the respondents ranged from 47 to 77, with a mean age of (n = 25) 62.52 years. The gender distribution of the respondents was 10 females (40 per cent) and 15 males (60 per cent). 23 of the respondents (92 per cent) were married, eight of them had American partners and two of them were divorced from their American partners. Their arrival dates in the US varied. Seven of them arrived in the US in the 1950s; five arrived in the 1960s, ten came in the 1970s whereas three of them came in early 1980s. All respondents except one arrived in the US as young adults to have a further education and training or to work. In fact, all the respondents had very high educational levels: five of them had master's degrees, 19 had PhDs, and only one of them had a high school diploma. There were eight engineers, four physicians, and three full professors of social sciences, two architects, two self-employed businesspersons, one World Bank consultant, one director of an NGO, one chemist, one biochemist, one economist, and one administrator at a well-renowned university. 72 per cent of the respondents came from big, urban centers in Turkey, like Izmir, Ankara and İstanbul.
- Unlike the other groups of respondents who had intense contacts with Turkey, this group reported that their communications with homeland and families were quite restricted during the initial years of their stay in the US in the 1960s and 1970s, as phone was very expensive at that time and there was no Internet. The best thing they

could do then was to write letters once a month and if available, to read old Turkish newspapers in the libraries of the universities. They were all thinking of themselves temporary when they first came to the US. At the moment, however, only two respondents said that they were still not sure and the rest (92 per cent) acknowledged that they regarded themselves permanent in the US: "It took us a while to get used to our new 'immigrant' identity, but we are permanent in the US now. Living here took lots of things away from us but it has brought lots of positive things as well. Diplomats come and go but we are always here to represent Turkey in America" (47 year-old administrator).

- After completing their graduate studies, ten of the respondents returned to Turkey for some time, but then they felt that they were compelled to go back to the US due to a combination of reasons, such as political instability (especially in the late 1970s), corruption, lack of resources, weakness of infrastructure, lack of available jobs and lack of opportunity for professional advancement, lack of appreciation for work and qualifications earned, the huge differences in living standards and wages between the two countries at that time, and education of children. Some others changed their minds of returning to Turkey because of the negative political and economic environment. "I returned to Turkey after completing my PhD in the U.S. but the political climate, anarchy, and the economic conditions in the 1970s was not bearable at that time to continue further" (60 year-old engineer).
- Back in 1970s, with the exception of Turkish physicians who were mostly naturalized in order to meet legal requirements, many first-generation Turks retained their Turkish citizenship even after they were allowed to acquire American citizenship after several years of stay in the country (Halman, 1980: 995). Change of citizenship and denouncing Turkish nationality was severely criticized then by the Turkish media (Halman, 1980: 995) and probably by some circles inside the Turkish community living in the USA. When the dual citizenship became law and adopted by the Turkish Parliament in the 1980s, many of respondents became naturalized American citizens. As this group felt very close to Turkey despite their long years of voluntary separation, most of them had retained their Turkish citizenship.
- This generation of Turkish highly skilled immigrants is the excellent example of a "transmigrant" (Glick Schiller and Basch, 1995). In other words, they are able to "cross cultural boundaries and build multiple or hybrid identities" (Castles, 2002: 1158), but they feel solidarity with co-ethnics in the US. Within the walls of their houses or cultural associations, they establish their own-states: "We have a small circle of Turkish friends. We are each other's 'Turkey' in a sense. We come together, talk in Turkish, eat Turkish food, and our children get together" (66 year-old bio-chemist).
- According to Portes and his colleagues: "Immigrant communities with greater average economic resources and human capital (education and social skills) should register higher levels of transnationalism because of their superior access to the infrastructure that makes these activities possible" (1999: 224). Not all activities of the respondents consist of establishing businesses linking the two countries, or sending money for those left behind. More often, their transnational activities are quite modest, like reading the Turkish newspapers online, going to Turkey once a year, buying summer houses if they were retired, calling friends and other family members in Turkey once a week, but as Phizacklea suggested these modest activities are "no less transnational in form" (2004: 129).

In answering a question about whether they feel their place of belonging is Turkey or the USA, 80 per cent of them (20 respondents) said both, eight per cent (two respondents) said USA, eight per cent (two respondents) said Turkey, and one said none. When they retire, they start to live more in Turkey and become more involved in Turkey than never before.

Returnees

- This group consists of people who have returned to Turkey after studying and working in the US. The ages of the respondents ranged from 30 to 62, with a mean age of (n = 10) 38.7 years. Two of the returnees were married whereas one of them was divorced and the rest was single. They were born in big cities in Turkey, like İstanbul, Ankara and Konya. They spent minimum six years up to 20 years in the US (the mean is 11.3 years). The gender distribution was two females and eight males.
- The main reasons that led their return to Turkey from the US are a combination of personal and professional choices. The developments and economic impetus Turkey has undergone in the last years was also cited as an important factor. The respondents also mentioned that it was getting harder to find a suitable job in the US and there were discriminatory attitudes towards foreigners after 9/11. Interestingly enough, except two respondents one is a temporary returnee, and another is a professor of political science all the others were working in the private sector in Istanbul: "If you are doing scientific research, then you are happy to be in the USA. But for business people like us, there is not much life. Americans are not social people. They help but they are distant. They are very individualistic. There is too much emphasis on how much you make, rather than who you are. The concept of 'friendship' is very different in the USA. They are egoistic. The system requires that in a way" (34 year-old marketing manager).
- In answering a question about their place of belonging, unlike the 'pioneer' skilled migrants who had been living in the US for more than 20 years, all of them said that it was Turkey.

Undergraduate Students in Turkey With Intentions to go abroad

Ten undergraduate students from different fields in Turkey were interviewed to learn more about their future intentions of going abroad for a master's and/or doctoral study. The students were from the departments of management (22 year-old, male), international relations (23 year-old, male and 24 year-old female), graphic design, (24 year-old, male), mathematics (23 year-old, female), political science (23 year-old, male), molecular biology and genetics (24 year-old, female), chemistry (24 year-old, male), electrical and electronics engineering (23 year-old, female and 23 year-old, male). Main reasons for further education abroad are cited as: the opportunity to have a totally different experience in a different country with different customs and values; the perception that universities in US provide high quality education and that they have more research possibilities; and the common view that people who study abroad are more preferred by employers or it is necessary to have an experience in the US to pursue a successful academic career in Turkey; and to obtain a wider perspective on the profession and to have professional advancement which would lead to set up a better career.

- The Internet network and professors in Turkey who have completed their studies abroad, friends or relatives in the USA already doing their graduate studies are the main source of information among students in Turkey who would like to go abroad for further study. The main destination country is the US whereas four of the respondents mentioned that they would also consider going elsewhere, like Australia, Canada, the UK, or Germany. The respondents plan to finance their education through a scholarship from the university they would like to attend and try to get a teacher's assistantship or research assistantship. They all want to return to Turkey after completing their graduate studies and pursue careers in Turkey. Male respondents mentioned that they would look for working opportunities to have the option of short-term military service upon return. One of the respondents mentioned the negative consequences of 'brain drain' and he said he would return Turkey in any case. Another one had expectations that there would be more research possibilities in Turkey within five to ten years.
- Return to the country of origin after completion of studies abroad is only conditioned by the students of basic sciences, like biology, chemistry and mathematics, as well as engineering students, as they would like to see more research funding, possibilities, and job openings in their field in Turkey. They also said that if they could find a better position abroad, they would stay.

Conclusion

- Apparently, there may be both negative and positive outcomes of skilled migration from any given country. Lowell (2003) says that two conditions are necessary for the "brain drain" to occur. First, there must be a significant loss of the highly educated population. Second, adverse economic consequences must follow, as the loss of human capital acting like the financial capital affects the economic growth negatively. The direction of flows might be added as a third condition, as "brain drain" usually refers to a one-way flow of highly skilled. Moreover, in order to assess the impact of "brain drain" and "brain gain" on any sending country, apart from the selection of emigrants, the net migration rate, and long-term effects on economic growth, duration and direction of migration as stated above, there should be certain criteria to be taken into consideration, like the size (population) and wealth of the sending country. the diaspora effect (Docquier and Marfouk, 2006) and the pull factors to attract the highly skilled back to the country of origin.
- Although it is difficult to assess the brain drain-induced losses caused by skilled migration and its long-term effects of 'brain drain' on economic growth, in line with the criteria given here, we come to the conclusion that the flow of Turkish highly skilled people to the USA should not be seen as a great loss of human capital. First of all, the numbers of leaving Turkey are not that high and therefore do not pose an immediate threat to the country's economic, scientific, social and cultural development. Describing the loss of skilled workers in both developing and developed countries, Docquier and Marfouk (2006) underline that the "selection rate" or the proportion of skilled emigrants in the total emigration stock from Turkey is rather low and the brain drain is particularly overestimated in Turkey when compared with the previous study of Carrington and Detragiache (1998)¹⁹, if the low level of education is to be considered among the majority of Turkish immigrants who live mainly in Europe.

- 59 Secondly, most highly skilled establish strong bonds with country of origin, visiting Turkey at least once a year, teaching Turkish and passing on the values of Turkish society to their children born in the USA. Therefore, the presence of highly skilled and the emergence of a Turkish diaspora in the USA is an asset for Turkey, which could be mobilized both for the benefit of the home country and to foster the relations between Turkey and the USA.
- Iredale and Appleyard state that there are three stages in brain drain: 1) little or no benefit from skilled migrants for the sending country, 2) some benefits accrued from returned skilled people and investments made in the sending country, 3) return skilled migration and temporary or permanent return of talent and capital (2001: 5-6). This research confirms that Turkey is now more or less in the second stage, as the interviews with the young professionals and pioneer skilled migrants suggest that "brain circulation" is on the rise with the intensive contacts between the countries of origin and destination. A large number of Turkish origin people in the US are involved in transnational activities, such as information transfer, charity work, and investment. At the same time, there is a certain flow of social and economic remittances. However, if the major determinants of skilled migration remain, and get even worse in Turkey, such as differences in living, working and research conditions, lack of technological resources, and the absence professional employment opportunities, many Turkish scientists and engineers working and studying in the US will be more reluctant to circulate, let alone return for good.
- There are a number of steps to be taken to ensure "brain gain" and "brain exchange" and it is high time to come up with short, medium or long-term policies to tackle with this phenomenon. It should also cautiously be noted that returned skilled migrants alone cannot trigger economic, political, social change on their own, rather what is needed is the sound policies initiated by the governments, international organizations, non-governmental organizations (Iredale and Appleyard, 2001: 6). The return of highly skilled from abroad is no longer effective without the providing attractive conditions and infrastructure development.
- Therefore, in terms of research and education, it is recommended that Turkey should act immediately upon the need for improvement of the overall research environment in Turkey. It is also necessary to build a close scientific collaboration between USA and Turkey and to facilitate the international movement of scholars and researchers and encourage academic and sectoral cooperation at an international level. In order to transfer technology and knowledge from the US to Turkey, it is necessary to develop and invest in the science and technology sector as well as allocating more resources to R & D. In order to realize a creative environment, there should be tri-partite collaboration among universities, private sector and the state and more involvement by the industry is needed on R & D.
- Like many developing as well as developed countries in the world, Turkey must be prepared to address the challenges by the globalization of labor market and increased mobility of its highly skilled nationals. A well-managed skilled migration policy should be developed in Turkey to secure "brain gain". Therefore, Turkey should also address structural problems, like corruption, low wages, and unattractive working conditions, and try to eliminate frustration associated with doing business with Turkey, and develop further an open, rule-based, trustworthy trading and financial system. Turkey should also continue reforms in the labor markets and attract more foreign direct

investment (FDI), as FDI will also accelerate reverse brain drain as in the case of China, India and Korea (See Stalker, 2000: 111-112). Turkey could also try to attract more skilled labor and foreign students into Turkey from Central Asia and former Soviet Republics to increase net "brain gain".

- Another policy approach is to ensure that highly skilled immigrants and temporary migrants stay connected to the country of origin. Therefore, Turkey should also assist the Turkish-American community in maintaining its cultural identity and strengthening relations with the country of origin. This is especially important in second or third generation, who is much more integrated in the USA in social terms and might tend to speak Turkish less. One of such programs implemented in Turkey as well as other developing countries is called TOKTEN (*Transfer of Knowledge Through Expatriate Nationals*).²⁰
- 65 Today, as we are living in a more globalized and smaller world, there is an urgent need for Turkey to come up with solid decisions to catch up with the developed nations. This is more apparent after the EU bid of Turkey and the overall desire to be a part of the "Western" world while preserving its own local values. In the future, student flows from Turkey as well as highly skilled migration are likely to increase. If the EU accession process continues without interruption, the flows of students and skilled professionals may chose to go to the EU countries rather than the United States. Furthermore, if the economic downturn in the US persists, and if the job opportunities become scarce for foreign-born, if the wage differentials between foreign-born and native-born continue to grow, and if the public attitudes towards Islam and Turkey deteriorate in general, then more return migration to Turkey may be expected. In the future, it is more likely that there will be even more selective procedures for the skills of those who want to stay in the US. This of course depends heavily at the same time whether Turkey could realize economic and social reforms to attract temporary and permanent highly skilled emigrants back to the country. The success of this challenging task will also encourage more investment from overseas.
- There is anecdotal but limited evidence that return migration is on the rise from the United States to Turkey. Some scholars (Faini, 2003; Kwok and Leland, 1982) argue that the returnees are usually those with fewer skills and less productivity. Among the whole respondent group, the returnees constitute only a minor part and they returned to the private sector mainly in Istanbul. There is, however, no evidence in this research suggesting that return migration to Turkey is characterized by negative self-selection. Although it will be difficult to assess the negative selection, a more comprehensive research is needed on the returned migrants in different sectors. It will also be interesting to compare Turkish skilled migration to other countries, especially to major Western European countries, like Germany and the UK.

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NOTES

- **1.** Migration Policy Institute, a Washington-based think-tank, states that migration of skilled people and international students is among the top-10 migration issues in the world in 2005.
- 2. Unlike the US green card allowing permanent residency, German green cards are issued temporarily for a maximum of five years.
- 3. According to the OECD, highly skilled workers are defined as having a university degree or extensive experience in one field. It includes highly skilled specialists, independent executives and senior managers, specialized technicians or tradespersons, investors, businesspersons, etc. (Iredale, 2001: 8). For the purposes of this study, "highly skilled" are defined as those who have either completed their tertiary education of 13 years or more and started working in the labor market or who are about to finish their doctoral or post-doctoral studies.
- **4.** The term *foreign born* refers to people residing in the United States on census day who were not United States citizens at birth. The foreign-born population includes immigrants, legal non-immigrants (e.g., refugees and persons on student or work visas), and persons illegally residing in the United States.
- 5. In his article, Oğuzkan (1976) referred to other researches on brain drain from Turkey. One of them is on Turkish engineers and architects working in Europe and in the US carried out by Peter Goswyn Franck (1967), Committee on the International Migration of Talent, pp. 299-373. The others are on Turkish medical doctors a) carried out by Taylor, Dirican and Deuschle (1968) entitled Health Manpower Planning in Turkey, published in Baltimore by Johns Hopkins Press; b) by Ferguson and Dirican (1966) entitled "The Turkish Medical Graduate in America, 1965: A Survey of Selected Characteristics," published in The Turkish Journal of Pediatrics, 8 (3): 176-190.
- **6.** See the article on Doctor Mehmet Öz, who also became a popular figure in Turkey: "Doctor Oz Relates His Popularity With American-Like Team Work Formula", published in *Zaman USA*, Friday, July 22, 2005. Such articles abound. But more articles on successful Turkish scientists can be found in *Posta*, dated August 24, 2005, "Türk'ten müthiş buluş" (Brilliant discovery by a Turk); *Cumhuriyet, Bilim Teknik*, dated November 19, 2005, "Türk Bilimadamına ABD'den büyük ödül" (Grand prize given to a Turkish scientist in the USA).
- 7. See the article "Beyin Göçü Salgın Hastalık Oldu" (Brain drain has become an epidemic) in daily Hürriyet, July 18, 2004.

- **8.** One ongoing research is carried out by S.E. Esen as a policy analysis exercise to be submitted to the John F. Kennedy School of Government, Harvard University, titled "Policy Recommendation to Manage the Emigration of Highly Skilled Labor in Turkey". Another ongoing research is carried out by Uludağ University. It is a comparative study on Turkish skilled migrants living in Europe and the USA
- 9. Kurtuluş based her survey on 90 respondents, although she initially wanted to reach a number of 500 respondents. As she mainly depended on return of questionnaires by post, there were many unanswered or unreturned mail. Tansel and Güngör (2003) based their research on internet survey only, and this resulted many incomplete forms and less accuracy at the qualitative level. They included the universities located in the US, Canada, and the United Kingdom, but 85 percent of the data was collected from Turkish students in the USA.
- 10. Findlay (1995; quoted in Iredale, 1997: 4) refers to skilled migrants as "invisible phenomenon".
- 11. Turkish American Scientists and Scholars' Association (TASSA) which was founded by young Turkish American professionals established a visiting scientists program in 2004, enabling Turkish scientists and scholars working in the USA visit Turkey temporarily and share their research and experience with their colleagues in Turkey. TASSA also initiated a partnership program called TASTUB with the Scientific and Technical Research Council of Turkey (TÜBITAK).
- 12. Although this is a conservative estimate and the tuition, fees, room and board of some American universities are much higher, the researchers did not take into consideration the number of Turkish students sent by the Turkish government as well as those who received scholarship and research assistantship from individual universities.
- 13. Open Doors 2005, Report on International Educational Exchange.
- 14. It should be noted that their estimate is much larger than IIE's annual reports, namely Open Doors Report on International Educational Exchange, on the number of Turkish students. This difference may partly be explained by the fact that small colleges, business schools, language institutes, and other technical schools are not always listed in the IIE's survey.
- 15. The term "student" was described as a nonimmigrant class of admission, an alien coming temporarily to the U.S. to pursue a course of study in either an academic (college, university, seminary, conservatory, high school, elementary school, other institution, or language training program) or a vocational or other recognized nonacademic institution.
- **16.** Poyrazlı et al. (2001) also indicated that the Turkish students in the USwho received state-scholarship had more adjustment problems due to the bureaucracy the studentsneeded to deal with and the pressure to do well academically in order to keep their scholarships.
- **17.** There is evidence from fieldwork that children influence return plans of their parents (See Dustmann, 2003 for a similar discussion).
- 18. In countries as big as China and India, although they have the highest number of skilled migrants in the USA, 'brain drain' is not a concern anymore, as they still have a significant share of skilled and educated workers and low emigration rates when compared to the size of the population. But if small countries with less educated labor force and less income levels have high emigration rates, then they are the hardest hit (like Jamaica, Gambia and Ghana) (Commander et al., 2003; see also Docquier and Marfouk, 2006).
- 19. Carrington and Detragiache (1998) generalizes that migrants tend to be much better educated than the rest of the population in their country of origin, which does not hold true for the vast majority of Turkish immigrants in Western Europe.
- 20. This program was initiated in 1976 by the United Nations Development Program (UNDP) and the Turkish Government and was originally called "Retransfer of Technology to Turkey". The main objective of the project was to supply Turkey with short-term expertise not immediately available, in scientific, technological and socio-economic fields through high-level expatriate specialists of Turkish origin, and thus contribute to the development of the country in the long-term.

21. See for example Can Dündar's article "Dönüyorlar" (They are Returning) in *Milliyet* on October 3, 2004 or Kaan Okurer's article "Kesin Dönüş or Returning for Good" in *Robert College Quarterly*, Winter 2005.

ABSTRACTS

Excessive 'brain drain' or emigration of highly skilled individuals is considered as an important negative factor for the intellectual, academic, labor productivity of any given country. This general observation is also pertinent in the case of Turkey, which is a net exporter of skilled migrants, although the latter point is overlooked in the debate about international migration flows involving Turkey. Based on on-site observation and analysis among different groups of highly skilled from Turkey in the United State as well as returnees and those in the country of origin who intend to go abroad in the near future, this paper aims to fill in the void in available literature concerning the dynamics of 'brain drain' from Turkey to the U.S., the key recipient of Turkish professionals, scientists, as well as graduate and post-graduate students, a significant number of which tend not to return. The premise of this paper is not that all export of skilled individuals is inherently negative. Instead, it argues in favor of a migration policy framework for the highly skilled that could produce balance between 'brain drain' and 'brain gain'.

Existe-t-il vraiment un exode des cerveaux? Les migrants hautement qualifiés aux États-Unis et le débat sur « l'exode des cerveaux » en Turquie. Un « exode » excessif des cerveaux, ou l'émigration d'individus hautement qualifiés est considéré comme un facteur qui influe fortement, de manière négative, sur la productivité intellectuelle et académique, ainsi que sur celle du travail dans n'importe quel pays. Cette observation générale est également pertinente dans le cas de la Turquie, qui est exportatrice nette de migrants qualifiés, bien que ce dernier point soit négligé dans le débat sur les flux migratoires qui impliquent la Turquie. Basé sur une observation et une analyse in situ parmi différents groupes d'immigrants turcs aux États-Unis, ainsi que sur ceux qui rentrent au pays, et sur ceux qui ont l'intention d'aller à l'étranger dans un proche avenir, le présent article se propose de combler les manques de la littérature existante relative à la dynamique de « l'exode des cerveaux » de Turquie vers les États-Unis, qui reçoivent la plupart des membres de professions qualifiées, des scientifiques, ainsi que des doctorants et docteurs, dont un nombre important a tendance à ne pas revenir. Les prémisses de cet article ne sont pas que toute exportation d'individus qualifiés est en soi négative. Elles plaident au contraire en faveur de la mise en place d'un cadre de politique migratoire des personnes hautement qualifiées qui puisse créer un équilibre entre « exode » et « gain » de cerveaux.

¿Existe verdaderamente una fuga de cerebros? Los inmigrantes altamente cualificados de Estados Unidos y el debate sobre la «fuga de cerebros» en Turquía. Una «fuga» excesiva de cerebros o la emigración de individuos altamente cualificados constituyen factores que influyen, de manera importante y negativa, en la productividad intelectual, académica y laboral de cualquier país. Esta observación de orden general es pertinente en el caso de Turquía, país exportador neto de inmigrantes cualificados. Con todo, este punto es desestimado por el debate sobre los flujos migratorios que implican al país. Este artículo se apoya en una observación y un análisis in situ de diferentes grupos de inmigrantes turcos instalados en Estados Unidos, de otros que han vuelto Turquía y de otros que tienen la intención de dirigirse al extranjero en un futuro

próximo. El propósito del artículo es pues de compensar los vacíos existentes en la literatura relativa a la dinámica turca de «fuga de cerebros» con dirección a Estados Unidos. Dicha «fuga» concierne la mayoría a miembros de profesiones cualificadas, de científicos y de doctores de los cuales un gran numero tenderá a no volver. Las premisas de este artículo no consideran como negativa toda exportación de individuos cualificados; al contrario, se propone el desarrollo de un marco para una política migratoria relativa a las personas altamente cualificadas que permita crear un equilibrio entre «fuga» y «ganancia» de cerebros.

INDFX

Mots-clés: exode des cerveaux, retour, travailleurs qualifiés, politiques migratoires **Geographical index**: États-Unis, Turquie

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